

D'YAKOVA, R.M., dotsant; ZUZANOVA, V.I., prof.; LITVINENKO, A.G.
[Lytvynenko, A.H.]; PESNYACHEVSKAYA, G.D. [Pisniachevs'ka,
H.D.]; BESONOVA, M.M., prof.; BELYIY, O.F. [Bielyi, O.F.];
PRIMAKOV, S.V.; YUNKO, M.A.; GOL'DIS, S.N. [Hol'dis, S.N.];
BARAN, M.A.; KOSACHEVSKAYA, P.I. [Kosachevs'ka, P.I.], dotsent;
SHTAN'KO, L.V.; GAGARINOV, V.S. [Haharynov, V.S.]

Annotations and author's abstracts. Ped. Akush. i gin. 24
no.6:33-36 '62. (MIRA 17:4)

1. Kafedra pediatrii Zapozhzhskogo instituta usovershenstvovaniya vrachey (for D'yakova).
2. Kafedra pediatrii Odesskogo meditsinskogo instituta (for Zuzanova).
3. Klinika infektsionnykh bolezney Odesskogo meditsinskogo instituta (for Litvinenko).
4. Kafedra detskikh infektsionnykh bolezney Khar'kovskogo meditsinskogo instituta (for Pesnyachevskaya).
5. Klinika detskikh infektsionnykh bolezney Krymskogo meditsinskogo instituta (for Bezsonova).
6. Kafedra fakul'tetskoy pediatrii Krymskogo meditsinskogo instituta (for Belyy).
7. Shakhternaya bol'nitsa g. Bokovo-Antrasit (for Primakov).
8. Starosamborskaya rayonnaya bol'nitsa L'vovskoy oblasti (for Yunko).
9. Vinnitskaya detskaya bol'nitsa No.2 (for Gol'dis).
10. Kafedra gigiyeny Kiievskogo instituta usovershenstvovaniya vrachey (for Baran, Kasochevskaya).
11. Kafedra urologii Kiievskogo meditsinskogo instituta (for Shtan'ko).
12. 9-ya gorodskaya bol'nitsa g. Dneprodzerzhinka (for Gagarinov).

GAGARIN V.S., kand. med. nauk.

Congenital teratoid tumor of the testis in a year and half old child. Urologiia. no.5:56 '64. (MJA 18:8)

1. Urologicheskoye oboleniye (zav. V.S.Gagarinov) bol'nitsy Dneprodzerzhinska.

ROMANOV, G.V.; GAGARINSKAYA, V.V.; MOROZOVA, N.S.

D-hydrosulfite medium for controlling the sterility of biological preparations preserved by mertiolate. Zhur.mikrobiol.epid. i immun. 30 no.2:66-70 F '589. (MIRA 12:3)

1. Iz Gosudarstvennogo knotrol'nogo instituta meditsinskikh i biologicheskikh preparatov imeni Tarasevicha.
(ANTISPATICS, MERCURIAL,

hydrosulfite medium in control of sterility of biol.
prep. preserved by mertiolate (Rus))
(CULTURE MEDIUMS,
same)

ROMANOV, G.V.; GAGARINSKAYA, V.V.

Molecular stabilization of the sol of agar-agar in liquid
culture media. Lab. delo 8 no.10831-35 '62
(MIRA 17&4)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni L.A. Tarasevicha (dir. L.S. Ogloblina).

Gagarinskiy, Yu. V.

SEABORG, Glenn T.; KATZ Joseph J.; GAGARINSKIY, Yu.V. [translator]; TSENTER,
E.M., [translator]; NIKOLAYEV, A.V., professor, doktor khimicheskikh
nauk, redakteur; ANNOL'DOV, V.V., redakteur; CHAPOVALOV, V.I., tekhnicheskiy
redakteur.

[Actinide elements. Translated from the English] Aktinidy. Pereveden
s angliiskogo IU.V.Gagarinskogo i E.M.TSentera. Pod red. A.V. Mike-
laeva. Moskva, Izd-vo inostrannei lit-ry, 1955. 701 p. (MLRA 9:4)
(Radioactive substances)

GAGARINSKIY, YU.V.

Gagarinskiy, Yu. V.

6656* (Russian) Composition and Structure of Dissociation of a Stable Crystalline Hydrate of Uranium. Sostav i davlenie dissolyatsii uranichivogo kri-

chetydokhloristogo urana. M. M. Popov and I. A. Slobodchikova. Zhurnal Neorganičeskoi Khimii, v. 2, Jan. 1957, p. 33-36. 2

The existence of a hydrate of the formula $UF_4 \cdot H_2O$ was established. Dissociation pressure in the range of 2 to 85 atm and the hydration heat of UF_4 + liquid water were determined.

Gagarinskiy, Yu. V.

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria,
Physical-Chemical Analysis, Phase Transitions.

B-8

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3766.

Author : M.M. Popov, Yu.V. Gagarinskiy, N.N. Stepanenko.

Inst :

Title : Dissociation Pressure of $\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$ at 25 to 45°.

Orig Pub: Zh. neorgan. khimii, 1957, 2, No 7, 1457-1459.

Abstract: The dissociation pressure of $\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$ was measured at 25 to 45° with differential tensimeters. The adjusted mean experimental values satisfy the equation $\log P$ (mm of merc. col.) = 10.228 - 2967/T. The calculated heat of Li_2SO_4 hydration by liquid water is 3.18 kcal per mole.

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-15-

GAGARINSKIY Yu. V.

89-3-15/30

AUTHORS: Popov, M. M., (Deceased), Gagarinskiy, Yu. V., Senin, M. D.,
Mikhalenko, I. P., Morozov, Yu. M.

TITLE: The Mean β -Ray Energy and the Decay Constant of Tritium
(Srednyaya energiya β -chastits i postoyannaya raspada
tritiya)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 3, pp. 297 - 298 (USSR)

ABSTRACT: First the apparatus is described by means of which uranium-tritide is produced. The method of measurement (a calorimetric one) is described. The experiments furnished the following values:

$$T_{1/2} \text{ for } H^3 : 12,58 \pm 0,18 \text{ a}$$

$$\bar{E}_{\beta^-} : 5,52 \pm 0,01 \text{ KeV}$$

There are 1 figure, 2 tables, and 6 references, 1 of which is Slavic.

SUBMITTED: August 10, 1957
Card 1/2

89-3-15/30

The Mean β -Ray Energy and the Decay Constant of Tritium

AVAILABLE: Library of Congress

1. Tritium-Decay constant
2. Tritium- β -Ray energy

Card 2/2

5(2), 21(1)

SOV/78-4-6-6/44

AUTHORS: Gagarinskiy, Yu. V., Mashirev, V. P.

TITLE: On the Crystal Hydrates of Thorium Tetrafluoride (O kristal-logidratakh tetraftorida toriya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1246-1252
(USSR)

ABSTRACT: The crystal hydrates of thorium tetrafluoride were synthesized and their structure investigated. The crystal hydrates of thorium tetrafluoride were produced from 0.1 - 0.5 dehydrated thorium nitrate solution (Kahlbaum-preparation) and hydrofluoric acid. The production method is the following: The $\text{Th}(\text{NO}_3)_4$ -solution which was heated up to 60-80°, and (20% HF) diluted hydrofluoric acid were dropped at the same time into distilled water which was heated up to 60-80°. The deposit is filtered off immediately after the precipitation in order to produce the higher crystal hydrate of thorium tetrafluoride. To obtain the lower crystal hydrate the deposit is filtered off only after three days. Figure 1 represents the micro-photography of the crystal hydrate of thorium tetrafluoride (a - higher crystal hydrate, b - low crystal hydrate). The radiographs of the crystal hydrates of ThF_4 of their dehydrated products were taken as well as the hydrated products. The

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On the Crystal Hydrates of Thorium Tetrafluoride SOV/78-4-6-6/44

results are given in table 1 and in the figures 2 and 3. The results show that the phases produced by the dehydration of the ThF_4 crystal hydrates have the same structure as the initial⁴ crystal hydrates of thorium tetrafluoride. The initial crystal hydrates are reproduced by the hydration of the dehydrated phase. The hydration heat of the dehydrated phase was determined. It amounted to $Q = 2073 \pm 4 \text{ cal/mol}$ for $\text{ThF}_4 \cdot 2.5\text{H}_2\text{O}$, and to $Q = 1174 \pm 5 \text{ cal/mol}$ for $\text{ThF}_4 \cdot 0.5\text{H}_2\text{O}$.

The hydration heat of the dehydrated samples of thorium fluoride is given in figure 2. The formulas $\text{ThF}_4 \cdot 2.5\text{H}_2\text{O}$ and $\text{ThF}_4 \cdot 0.5\text{H}_2\text{O}$ were written down for the crystal hydrates. The X-ray investigations were carried out by N. T. Chebotarev and N. I. Kuzin, the chemical analyses by A. F. Pugina. There are 4 figures, 2 tables, and 17 references, 5 of which are Soviet.

SUBMITTED: April 14, 1958

Card 2/2

5(2), 21(1)

SOV/78-4-6-7/44

AUTHORS: Gagarinskiy, Yu. V., Mashirev, V. P.

TITLE: On the Crystal Hydrates of Uranium Tetrafluoride (O kristal-logidratakh tetraftorida urana)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1253-1259
(USSR)

ABSTRACT: The crystal hydrates of uranium tetrafluoride were investigated by the tensimetric method and X-ray analyses. The low crystal hydrate $UF_4 \cdot 0.4H_2O$ was produced by the following method: a hydrofluoric acid of 40% was dropped into an aqueous UCl_4 -solution with 300 g/l uranium concentration at 50-60° with an excess of 10-20% and well mixed. The precipitation is filtered off and carefully washed out with water, then washed out a second time with alcohol and dried at room temperature. The microphotography of the crystals $UF_4 \cdot 0.4H_2O$ is given in figure 1. The X-ray analyses showed that the compound has a pseudocubic lattice. The X-ray analyses of the low uranium tetrafluorides were carried out by N. I. Kuzin, the chemical analyses by A. F. Pugina. In the case of a precipitation at 80-100° two phases of uranium tetrafluoride are produced. The one phase corresponds to the crystal hydrate with pseudocubic

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On the Crystal Hydrates of Uranium Tetrafluoride SOV/78-4-6-7/44

structure, the second phase could not yet be identified. The results of the X-ray investigation of the hydrated and dehydrated uranium tetrafluorides are given in table 1. It was found that the anhydrous UF_4 which is produced by the hydration of low crystal hydrates of uranium tetrafluoride in vacuum at slow temperature rise up to 250° maintains the structure of the initial compound. In the case of the hydration of the dehydrated UF_4 the initial crystal hydrate is reproduced. The hydration heat amounts in this case to $Q = 6.09 \pm 0.01 \text{ kcal/mol}$ (Table 2). The tensimetric investigation was carried out with the apparatus given in figure 2. On the strength of the results it was found that in the case of the dehydration of higher crystal hydrates of uranium tetrafluoride ($\text{UF}_4 \cdot 2.5\text{H}_2\text{O}$) solid solutions are produced with water and the same crystal structure as the initial crystal hydrates. The vapor pressure of the partly dehydrated $\text{UF}_4 \cdot 2.5\text{H}_2\text{O}$ at 95° is given in table 4. The isothermal pressure composition of the systems $\text{CuSO}_4 \cdot \text{H}_2\text{O}$ at 70° and $\text{UF}_4 \cdot \text{H}_2\text{O}$ is given in figures 3 and 4. The vapor pressure of $\text{UF}_4 \cdot 0.4\text{H}_2\text{O}$ was investigated at 95° during the dissociation and it was found that the dissociation pressure of $\text{UF}_4 \cdot 0.4\text{H}_2\text{O}$ at 95° is low.

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On the Crystal Hydrates of Uranium Tetrafluoride SOV/78-4-6-7/44

There are 4 figures, 4 tables, and 8 references, 3 of which
are Soviet.

SUBMITTED: April 15, 1958

Card 3/3

21(1), 11(6)

AUTHOR:

Gagarinskiy, Yu. V.

SOV/89-6-2-2/28

TITLE: Application of "Gaseous" Fluorination in the Uranium Tetra-fluoride Production (Primeneniye "gazovogo" ftorirovaniya v proizvodstve tetafstorida urana)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 2, pp 124 - 128 (USSR)

ABSTRACT: This paper gives a survey of the subject mentioned in the title, in which the following reports of the 1958 Geneva Atomic Conference are referred to: 229, 542, 602, 1001, 1015, 1552 and 1840. There are 4 figures and 1 table.

SUBMITTED: November 10, 1958

Card 1/1

GAGARINSKIY, Yu.V.; MASHIREV, V.P.

Crystal hydrates of zirconium tetrafluoride. Izv.Sib.otd.AN
SSSR no.11:50-56 '59. (MIRA 13:4)
(Zirconium fluoride)

5.2200(4)

68121
SOV/78-5-1-40/45

5(2) AUTHORS: Mal'tsev, V. A., Gagarinskiy, Yu. V., Popov, M. M. (Deceased)

TITLE: Heat of Formation of Uranium Tetrafluoride

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1,
pp 228-229 (USSR)

ABSTRACT: The authors present the seven partial reactions whose total heat of formation yields the heat of formation of $\text{UF}_4 \cdot 2.5\text{H}_2\text{O}$. Some intermediate values are quoted from publications. ΔH_1 (heat of solution of solid UCl_4 in aqueous HCl), ΔH_2 (heat of reaction of uranium-tetrafluoride precipitation by means of hydrofluoric acid), and ΔH_3 (heat of mixing HCl with HF) were determined. For the summational equation $\text{U}_{\text{sol}} + 2\text{F}_{\text{gas}} + 2.5\text{H}_2\text{O} = \text{UF}_4 \cdot 2.5\text{H}_2\text{O}$, they obtained a total value of $\Delta H = -457.5 \pm 8.2$ kcal/mol, and for anhydrous UF_4 , a value of -449.3 ± 4.1 kcal/mol on the basis of the hydration heat determined in reference 10. It is noted that this value applies to the stable, monoclinic form of UF_4 and, therefore,

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68121
SOV/78-5-1-40/45

Heat of Formation of Uranium Tetrafluoride

deviates from the value mentioned in reference 1. There are
10 references, 4 of which are Soviet.

SUBMITTED: May 28, 1959

Card 2/2

GAGARINSKIY, YU.

81942
S/078760/005/07/10/014
B004/B056

21.3000

AUTHORS: Gal'chenko, G. L., Gagarinskiy, Yu. V.,
Popov, M. M. (Deceased)

TITLE: The Specific Heat of UF_4 in the Interval of 100-400°

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7,
p. 1631

TEXT: The authors determined the specific heat of dehydrated $\text{UF}_4 \cdot 2.5\text{H}_2\text{O}$ in a vacuum according to a method described in Refs. 1 and 2 by means of direct heating. In the temperature interval of from 100 to 400°C three series of experiments were carried out: a) 100-270°C, b) 100-370°C, and c) 370-400°C. The results are shown in a figure. In series a) reproducible values for the specific heat were found, which are considerably higher than the values of series b). In heating beyond 270°C a thermal effect was observed, which manifests itself by a decrease in specific heat. In heating to more than 370°C no thermal effect occurs, but the entire curve is lower than that of series a). The authors explain this

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The Specific Heat of UF_4 in the Interval of
100-400°

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B004/B056

phenomenon by the fact that in the dehydration of $\text{UF}_4 \cdot 2.5\text{H}_2\text{O}$, first an unstable form of UF_4 is formed, which has a higher specific heat than the stable form which is formed in heating to temperatures of between 270 to 370°C. In this the authors also point to the transformation of UF_4 after heating to 350°C to monoclinic structure, which is reported in Ref. 4. There are 1 figure and 4 references: 3 Soviet and 1 Japanese. X

SUBMITTED: August 25, 1959

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20175

S/089/61/010/003/005/021
B108/B209

24.6.20

AUTHORS: Kopytin, L. M., Gagarinskii, Yu. V.

TITLE: Influence of radioactivity of substances upon their physical and chemical properties

PERIODICAL: Atomnaya energiya, v. 10, no. 3, 1961, 238-243

TEXT: In consequence of continuous self-irradiation, radioactive substances are expected to display properties that are somewhat different from those of inactive materials. Alpha decay leads to local temperature peaks; in beta decay, some of the particles (molecules, atoms, ions) with increased energy exceed equilibrium in such systems. This causes an enhanced vapor pressure. Fig. 1 shows an idealized vapor pressure versus composition diagram for a system of two components, A and B, where B is radioactive. The radioactivity of B will raise the normal vapor pressure of both components by $\Delta P = \Delta P_A + \Delta P_B$, where ΔP_B denotes the change in partial vapor pressure of B due to self-irradiation. When the number of molecules evaporating due to self-irradiation is tak

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Influence of radioactivity of ...

to be proportional to the molar fractions of A and B, the expression $\frac{\Delta P_A}{\Delta P_B} = \frac{N_A}{N_B}$ is obtained. On the assumption that the total number of molecules vaporized during one decay event does not depend on the composition, $\Delta P = \Delta P_{B,N_B}^0$ (ΔP_B^0 - increase in vapor pressure of B due to self-irradiation). Basing on these considerations one obtains the expression $P = P_A^0 + (P_B^0 - P_A^0 + \Delta P_B^0)N_B$ for the resulting vapor pressure. P_A^0 and P_B^0 denote the vapor pressure of the pure, inactive components A and B. The vapor pressures of both components deviate from linearity (Fig. 1), but this with opposite signs, so that the sum remains linear. A slight diversity of the partition coefficients in distillation is also found if one of the components in the above system is radioactive:

$$\alpha = \frac{P_A^0 + \Delta P_{B,N_B}^0}{P_B^0 + \Delta P_{B,N_B}^0}$$

The three hydrogen isotopes H, D, and T are discussed as

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Influence of radioactivity of ...

to their vapor pressure. Here, the authors refer to various publications (e.g., Ref. 10: A. Price, Nature, 181, 268 (1958)). The effect of self-irradiation becomes particularly manifest in the case of Po²¹⁰ (alpha emitter, half-life 138.4 d) through the latter's relatively low boiling point as compared to other elements of the principal subgroup of the sixth group in the periodic system. The heat of evaporation calculated from the temperature dependence of the vapor pressure must be lower for radioactive substances. X-Ray analysis of heated and cooled polonium samples showed that the alpha and beta phases may co-exist between 0 and 75°C. In fact, if the sample consists of particles of various size, and if conversion entropy is low and interfacial energy high, such a sample may have, not a point, but a band of conversion. It is, however, known that metal layers vaporized in vacuo only consist of particles of equal size. Thus, the most plausible explanation of the co-existence of the two phases over a wide temperature range is the effect of self-irradiation which increases the number of structural defects in regions passing through a temperature peak. This effect leads to a metastable state of these regions. Curves 1 and 2 in Fig. 2

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Influence of radioactivity of ...

illustrate the temperature dependence of the free energy of the alpha and the beta phase, respectively. The above-mentioned regions may decrease their energy either by migration and recombination or by gradual conversion of the deformed alpha phase into the beta phase. Instead of a melting point, radioactive substances have a wide interval of liquid-solid state. Moreover, it is stated that the concentration of lattice defects in plutonium also depends on the history of the material. The authors thank A. A. Bochvar for perusing the paper and for valuable remarks. There are 2 figures and 31 references: 9 Soviet-bloc and 22 non-Soviet-bloc.

SUBMITTED: July 21, 1960

Card 4/⁴B

GAGARINSKIY, Yu.V.; RUCHKIN, Ye.D.; LUK'YANOVA, L.A.; KUSTOVA, G.N.;
BATSANOV, S.S.

Crystal chemical study of thorium tetrafluoride hydrates. Izv.
SO AN SSSR no.11 Ser.khim.nauk no.3:8-16 '69. (MIRA 17:3)

L 10584 23

RDS RML

ACCESSION NR: AP3001628

S/0192/63/004/003/0387/0394

AUTHOR: Batsanov, S. S.; Gagarinskii, Yu. V.

51
48

TITLE: Optical study of uranium tetrafluoride crystal hydrates

SOURCE: Zhurnal strukturnoy khimii, v. 4, no. 3, 1963, 387-394

TOPIC TAGS: uranium tetrafluoride, uranium tetrafluoride crystal hydrates, refractive indices, densities, infrared spectra, absorption spectra, hydrogen bond, hydrogen bonding in hydrates, infrared absorption lines, thermograms

ABSTRACT: The investigation of uranium tetrafluoride crystal hydrates is of interest not only from the theoretical point of view but from the practical side as well since the end product of uranium separation from ores and its refinement, as well as the starting material in the production of metallic uranium and uranium hexafluoride, is uranium tetrafluoride which in many methods of production is obtained by precipitation in the hydrate form and subsequent drying or calcination. Eleven samples containing from zero to 2.5 molecules of water per formula unit were prepared either by precipitation, subsequent dehydration in vacuum, re-hydration, or dehydration in a stream of HF. Refractive indices of all the samples were determined by the immersion method to an accuracy of plus minus 0.003 and their densities

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(in toluene) by a pycnometer to within 0.01 gm/cubic cm. Using this data, the molar refractions for the Na D line were calculated. Infra-red spectra of the samples were taken from 400 to 5000 per cm using a double beam UR-10 spectrometer. Spectra of samples possessing cubic symmetry had absorption line for the hydrated water indicating hydrogen bonding, whereas samples having rhombic symmetry showed two types of absorption line, those characteristic of hydrogen bonds, and those characteristic of no hydrogen bonding. All spectra exhibited an absorption maximum at 405-430 per cm which is ascribed to transverse vibrations of the U-F bond. Thermograms of vacuum dehydration were taken for two of the samples. The data, particularly from the infra-red analysis, is interpreted to indicate that in the higher crystal hydrate, UF₄·2.5 H₂O, possessing rhombic symmetry, the main portion of the water is bound to the fluorine by hydrogen bonds, the rest being in the field of the uranium ion. In the lower crystal hydrate (a phase with the water composition variable from approximately 1.5 up to 2 molecules of water), possessing cubic symmetry, all the water of hydration is bound to the fluorine through hydrogen bonds. "In conclusion, the authors express gratitude to Ye. I. Khanayev for participation in the development of a method for obtaining samples and to K. F. Smirnovaya for the assistance in the infrared investigation."

Orig. art. has: 3 figures and 4 tables.

Card 2/2

Inst. of Inorganic Chemistry

LAZUKOV, N. A.; GAGARINSKIY, Yu. V.; GARANIN, S. I.; SHISHKIN, G. V.

"Uranium-water critical assemblies."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,
31 Aug-9 Sep 64.

GABUDA, S.P.; CAGARINOV, Yu.V.; BURAKVA, S.A.; LOMAJO, A.G.

Proton resonance in uranium peroxide hydrates. Zhur. strukt. khim. 5 no. 2:303-305 Mr-Ap '64. (MIRA 17:6)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, Krasnoyarsk
i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN
SSSR, Novosibirsk.

GAGARINSKIY, Yu.V.; GAFNIK, S.P.; MIKHAYLOV, G.M.

Proton magnetic resonance in uranium tetrafluoride crystal
hydrates. Zhur. strukt. khim. 5 no.3:383-386 My-Je '64.
(MIRA 13:7)

1. Institut neorganicheskoy khimii Sibirskskogo otdeleniya AN
SSSR, Novosibirsk, Sibirskiy tekhnologicheskiy institut i
Institut fiziki Sibirskskogo otdeleniya AN SSSR, Krasnoyarsk.

GABUDA, S.P.; GAGARINSKIY, Yu.V.; LUNDIN, A.G.; MIKHAYLOV, G.M.

Magnetic resonance of F^{19} nuclei in uranium and thorium tetra-fluorides. Zhur. strukt. khim. 5 no.5:789-791 S-0 '64
(MIRA 18:1)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, Krasnoyarsk,
i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

L 58902-65 EPF(c)/EPF(n)-2/EPR/EWA(c)/EWT(m)/EWP(b)/T/EWP(t) Pr-4/Ps-4/
Pr-4 IJP(c) ES/MM/JW/JD/JG

ACCESSION NR: AP5017056

UR/0289/65/000/001/0014/0019

546.791.4:536,42:541,123.1

AUTHOR: Khrapin, L. A.; Gagarinsky, Yu. V.; Luk'yanova, L. A.

33

36

37

TITLE: Phase transformations of uranium tetrafluoride and tetrachloride

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1965, 14-19

TOPIC TAGS: uranium fluoride, uranium chloride, phase transformation

ABSTRACT: The melting points and polymorphic transformations of UF_4 and UCl_4 were determined by differential thermal analysis (DTA), in which the heating and cooling curves were recorded with an FPK-59 Kurnakov pyrometer. In the case of UF_4 , besides the exothermic effect at 1008°C corresponding to the solidification, there is a second exothermic effect at 837°C (see Fig. 1A of the Enclosure), which is attributed to the polymorphic transformation of the low-temperature α form of UF_4 into the high-temperature β form. Fig. 1B shows the cooling curve of UF_4 in the presence of supercooling, which causes the value of the melting point (965°C) to be low. The heating and cooling curves of UCl_4 are shown in Fig. 2A and B of the Enclosure. The melting point is displayed at 565°C, and a polymorphic transformation occurs at 542-548°C. Because these points are close

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ACCESSION NR: AP5017056

to each other, the polymorphic transformation effect is not resolved into an individual peak; instead, it is superimposed on the effect of melting or solidification. The heat of transformation for UF₄ was calculated to be about 3.4-3.8 kcal/mole, and that of UCl₄, approximately 2.8 kcal/mole. "In conclusion, the authors express their appreciation to V. A. Mikhaylov for valuable suggestions." Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Institut neorganicheskoy khimii Sibirskogo oddeleniya AN SSSR, Novosibirsk (Institute of Inorganic Chemistry, Siberian Branch, AN SSSR)

SUBMITTED: 13Jul64

ENCL: 02

SUB CODE: IC

NO REF Sov: 005

OTHER: 033

Card 2/4

L 26923-65 EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(t)/IWP(b) Pr-4/Ps-4/Pi-4 IJP(e)
ES/JD/WW/JW/JG/DM

ACCESSION NR: AP5004003

S/0089/65/018/001/0040/0045

38

36

B

AUTHORS: Gagarinskiy, Yu. V.; Khanayev, Ye. I.; Galkin, N. P.
Anan'yeva, L. A.; Gabuda, S. P.

TITLE: On the crystal hydrate $UF_4 \cdot 0.75H_2O$

SOURCE: Atomnaya energiya, v. 18, no. 1, 1965, 40-45

TOPIC TAGS: crystal hydrate, uranium fluoride, dehydration, crystal syngony, water of crystallization, phase transition

ABSTRACT: X-ray diffraction, refractometry, ir spectroscopy, nuclear magnetic resonance, and thermography are used to investigate a new hydrated form of uranium tetrafluoride with composition $UF_4 \cdot 0.75H_2O$, and the product of its dehydration. The results have shown that this form is a hitherto unknown crystal hydrate of uranium tetrafluoride of monoclinic syngony. The water is retained in this crystal.

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L 26923-65
ACCESSION NR: AP5004003

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hydrate by the hydrogen bond with fluorine. Depending on the strength of the bond, the water molecules can be subdivided into three groups, corresponding to three peaks in the absorption bands of the valence and deformation vibrations of the O-H bond. Dehydration of the investigated crystal hydrate proceeds in two stages. The syngony of the initial crystal hydrate is conserved at least down to the $\text{UF}_4 \cdot \text{H}_2\text{O}$ core. With further dehydration (to $0.5 \text{ H}_2\text{O}$), the substance experiences a phase transformation accompanied by a change in the structure. The crystal lattice of the phase produced is quite close to that of the crystal hydrate of cubic syngony. "The authors thank S. S. Batsanov for refractometric investigations, taking the ir spectra, and a discussion of the results, and also L. A. Khripin for taking the thermograms. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: None

Card

2/3

L 26923-65
ACCESSION NR: AP5004003

SUBMITTED: 24Jul64

NR REF SOV: 004

ENCL: 00

OTHER: 002

SUB CODE: SS, 4P

Card

3/3

KHRIPIN, L.A.; GAGARINSKIY, Yu.V.; ZADNEPROVSKIY, G.M.; LUK'YANOVA, L.A.

The binary system $UF_4 - UCl_4$. Atom. energ. 19 no. 5:437-441 N '65.
(MIRA 18:12)

BAKAKIN, V.V.; GAGARINSKIY, Yu.V.; BORISOV, S.V.; ZAINEL'NOVSKIY, G.M.;
DURASOVA, S.A.

Certain crystal chemical features of hydrated uranium tetrafluoride
of cubical form. Zhur. strukt. khim. 6 no. 4:562-566 Jl-Ag '65
(NIRA 19:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
g. Novosibirsk. Submitted August 24, 1964.

L 05023-67 EWI(1)/EWI(m)/EWP(t)/ETI IJP(c) JD/WW/HW/JG/GG

ACC NR: AP6032465

SOURCE CODE: UR/0056/66/051/003/0707/0710

AUTHOR: Gabuda, S. P.; Lundin, A. G.; Gagarinskiy, Yu. V.; Batsanova, L. R.;
Khripin, L. A.

ORG: Institute of Physics, Siberian Branch, Academy of Sciences SSSR (Institut
fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Institute of Inorganic Chemistry,
Siberian Branch, Academy of Sciences SSSR (Institut neorganicheskoy khimii
Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Nuclear magnetic resonance and hyperfine interaction in crystals of the
tysonite structural type

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 3, 707-710

TOPIC TAGS: nuclear magnetic resonance, hyperfine interaction, hyperfine
interaction constant, hyperfine coupling constant, crystal symmetry, tysonite type
crystal, fluorine nucleus, flourine compound, trifluoride, cerium trifluoride,
praseodymium trifluoride, neodymium trifluoride, uranium trifluoride

ABSTRACT: The magnetic resonance spectra of F¹⁹ nuclei in cerium trifluoride,

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ACC NR: AP6032465

praseodymium trifluoride, neodymium trifluoride, and uranium trifluoride poly-crystalline samples were studied. The averaged values of local magnetic fields near the fluorine nuclei were determined, and values of hyperfine coupling constants F^{19} nuclei with unpaired electrons were estimated. It was shown that the hyperfine interaction constant in cerium trifluoride is zero, whereas the constant A_{eff} significantly differs from zero for praseodymium trifluoride, neodymium trifluoride, and uranium trifluoride. The results obtained were interpreted on the basis of symmetry properties of the investigated crystals. The authors thank L. G. Falayeva for preparing all calculations by computer. Orig. art. has: 2 figures. [Based on authors' abstract]

SUB CODE: 07, 20 / SUBM DATE: 11Jan66 / ORIG REF: 002 / SOV REF: 001 /
OTH REF: 021 /

Card 2/2 LC

KOZLOV, F.; SHISHMANYAN, Zh.; GAGARNIKOVA, T.; KOVAL', V.

Ultra-shortwave operators on the air. Radio no.11:17 N '56.
(MLRA 9:12)

1. Predsedatel' korotkovochnoy i ul'trakorotkovochnoy sektsiy
radiocluba, Yerevan, Armeniya (for Shishmanyan).
(Radio, Shortwave)

GAGAROV, N.; FISHER, Ye.

Great work by a small group. Mor. flot 22 no.3:4-6 Mr '62.
(MIRA 15:2)

1. Korrespondent gazety "Tikhookeanskiy moryak" (for Gagarov).
2. Predsedatel' Nauchno-tehnicheskogo obshchestva vodnogo
transporta Vladivostokskogo portu (for Fisher).
(Merchant marine)

S/194/62/000/005/022/157
D256/D308

AUTHORS: Gagarskiy, A.P., Molchanov, A.S., and Zavilevich, M.L.

TITLE: Elements of the electrical circuit for automatic control of weight irregularities of ribbons

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1962, abstract 5-2-101 d (Nauchno-issled. tr. Tsentr. n.-i. in-t prom-sti lub. volokon, 1961, 15, 42-54)

TEXT: A detailed description is given of the elements of an automatic system devised for the weight irregularity control of ribbon on the J-1-J (L-1-L) ribbon machine under development for the spinning industry at TsNIIILV. The operation of the device is based on changing the speed of the pulling rollers according to the thickness of the ribbon entering the feeding rollers; consequently the regulator is a servo system. The automatic control system consists of pickups measuring the ribbon thickness, an integrating link, which adds voltages to the pickup [Abstractor's note: Probably a misprint of 'from the pickups'] delay unit memorizing the signal arriving from Card 1/2

S/194/62/000/005/022/157

D256/D308

Elements of the electrical circuit ...

the integrator for a period during which the ribbon passes from the point of measurement to the point of extension, an amplifier link, a control motor (rotating the pulling rollers), a feedback coupling link comprising a tacho-generator driven by the control motor. An inductive pickup is used for continuous measuring of the ribbon thickness, consisting of a W-shape transformer core with two secondary windings connected in opposite phase. The delay unit includes a phase shifting arrangement, the phase-shift being proportional to the time of delay. It consists of four R-C links with cathode-followers in between. For the amplification of the signals a DC amplifier with strong negative feedback is employed. The driving motor МН-5 (PN-5) is used, the velocity pickup is a tachogenerator type ЭТ-7/110 (ET-7/110). Technical specification and detailed calculations of the elements are presented. 13 figures. [Abstractor's note: Complete translation]. ✓

Card 2/2

GAGARSKIY, A.P., mladshiy nauchnyy sotrudnik; MOLCHANOV, A.S., mladshiy nauchnyy sotrudnik; ZAVILEVICH, M.L.

Elements of the electric circuit for the automatic control of the nonuniformity of the sliver weight. Nauch.-issl.trudy TSNIILV
15:42-54 '61. (MIRA 18:4)

1. Rukovoditel' laboratorii avtomatiki TSentral'nogo nauchno-issledovatel'skogo instituta promyshlennosti lubyanykh volokon (for Zavilevich).

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614010009-0

GAGARSKIY, E.; TASHKINOV, V.

News of Soviet engineering. NTO 3 no.12:24-25 D '61. (MIRA 15:1)
(Technological innovations)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614010009-0"

GAGARSKIY, E.A., inzh.

Increasing the loading capacity of freight cars in lumber
transportation. Vest. TSNII MPS 20 no.6:55-58 '61. (MIRA 14:10)

1. Institut kompleksnykh transportnykh problem.
(Lumber—Transportation)

GAGARSKIY, E.A., inzh.

Machinery for sorting and re-loading lumber. Mekh.i avtom.
proizv. 16 no.2:49-51 F '62.
(MIRA 17:3)

GAGARSKIY, E.A., inzh.; OBERMEYSTER, A.M.

Transportation of lumber. Mekh.i avtom.proizv. 17 no.1:31-33
Ja '63. (MIRA 16:2)
(Lumber—Transportation)

GAGARSKIY, E., inzh.

New method of lumber transportation by mixed railroad-water
communications. Rech.transp. 22 no.1:10-12 Ja '63.

(MIRA 16:2)

(Lumber—Transportation) (Unitized cargo systems)

FEDORENKO, P.I., inzh.; MIRITIN, I.P., inzh.; DREBNITSA, A.V., inzh.;
GAGAIZ, F.G., inzh.

Relationship between blasting operations and the productivity
of scraper haulage in systems with caving. Vzryv. delo no.
51/8:288-293 '63. (MIRA 16:6)

1. Institut gornogo dela AN UkrSSR.
(Krivoy Rog Basin—Blasting) (Mine haulage)

GAGAUZ, F.G., inzh.; NIKITIN, I.P., inzh.; FEDORENKO, P.I., inzh.;
CHERNETSOV, V.M.; KUPRIK, N.F., tekhnik

Practice of carrying out blasting operations in drifting at
the K. Libknekht Mine. Varyv. delo no.51/8:295-299 '63.

(MIRA 16:6)

1. Kreverozhskiy filial Instituta gornogo dela AN UkrSSR
(for Gagauz, Nikitin, Fedorenko). 2. Rudoupravleniye imeni K.
Libknekhta (for Chernetsov, Kuprik).
(Krivoy Rog Basin--Blasting)

NIKITIN, I.P., inzh.; GAGAUZ, F.G., inzh.; DROBNITSA, V.F., inzh.;
DROBNITSA, A.V., inzh.; CHERNETSOV, V.M.

Liberation of gas during the making of upraises. Bezop.
truda v prom. 8 no.9:20 S '64 (MIRA 18:1)

1. Krivorozhskiy filial Instituta gornogo dela imeni M.N. Fedorova
(for all except Chernetsov). 2. Rudnik im. K. Libknekhta (for
Chernetsov).

DREBNITSA, A.V., inzh.; GAGAUZ, F.G., inzh.; DROBNITSA, V.F., inzh.;
NIKITIN, I.P., inzh.

Reducing dust formation during blasting operations in
Bulgarian mines. Shakht. stroi. 9 no.9:28-29 S '65.
(MIRA 18:9)

GAGAUZOV, I.

BULGARIA/Organic Chemistry - Synthetic Organic Chemistry.

G-2

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 14538.

Author : Dalev D., Gagauzov I.

Inst :

Title : Syntheses with Beta-N-Morpholinoethyl Chloride. I. Preparation of 5-(Beta-N-Morpholino)-Ethyl-5-Alkyl Derivatives of Barbituric Acid.

Orig Pub: Farmatsiya (Bulg.), 1957, 7, No 4, 13-16.

Abstract: By heating (4-6 hours, 100-110°) beta-N-morpholino-ethyl- (I) or ethyl-beta-morpholino-ethyl- (II) ester of malonic acid with an alcohol solution of C₂H₅ONa, in the presence of urea, were obtained and isolated in the usual manner, 5-beta-N-morpholino-ethyl-barbituric acid, yield 65%; hydrochloride (HC), MP 239-241° (decomposes; from water), and 5-ethyl-5-beta-morpholino-ethyl-barbituric acid, yield 53%, MP 186-187° (from alcohol); HC, MP 272.5° (decomposes).

Card : 1/2

DALEV, D.; GAGAUZOV, I.

Studies on conditions for the production of 3-morpholino ethyl ether from morphine (folcodin). Nauch. tr. vissh. med. inst. Sofia 39 no.5: 165-170 '60.

1. Predstavena ot prof. D. Dalev, rukovoditel na Katedrata po farmatsevtichna khimmia.

(MORPHINE rel cpds)

DALEV, D.; GAGAUZOV, I.

On some color reactions with xanthydrol. I. A new color reaction in
the determination of: a. barbituric acid group; b. 3,5-dioxypyrazolidine
(butazolidin) group. Nauch. tr. vissh. med. inst. Sofia 39 no.5:119-124
'60.

1. Predstavena ot prof. D. Dalev, rukovoditel na Katedrata po far-
matsevtichna khimiia.

(PHENYLBUTAZONE chem) (BARBITURATES chem)
(INDICATORS AND REAGENTS)

DALEV, D., prof.; GAGAUZOV, I.

The production of nitrogen-substituted morpholine-ethylbarbiturates and their quaternary salts. Nauch. tr. vissh. med. inst. Sofia 41 no.4:21-32 '62.

1. Predstavena ot prof. D. Dalev.
(BARBITURATES)

RAGAUTDENOV, G.; GAGAIKOV, B.; TIKHONOV, B.

Konstantin Petrovich Versilovskiy; on his 60th birthday. Izv.
vys. ucheb. zav.; mat. no. 68772-173 '63 ('NRA 17a3)

GIGAYEV, B.M.

Sur l'unicite du systeme de fonctions orthogonales invariant relativement a la
derivation. C.R. Acad. Sci., 125(1929), 222-225.
Post integralov differentsiyal'nykh uravneniy. Kazan', Uchen. nauch. uneta, 85 (1925)
229-236.
O roste integralov differentsiyal'n uravneniy pervogo poryadka. Kazan', Izv. Fiz-matem.
o-va(2), 25 (1925), 15-19.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevskiy, P.I.
Moscow-Leningrad, 1948

GAGAEV B M

Gagaeff, B. Sur quelques classes de fonctions orthogonales. Bull. Acad. Sci. URSS. Ser. Math [Izvestia Akad. Nauk SSSR] 10, 197-206 (1946). (Russian. French summary)

The following theorem is proved. Suppose the functions $\varphi_n(x)$ are orthogonal in $a \leq x \leq b$ with respect to a function $q(x)$ and that their derivatives are orthogonal with respect to a function $p(x)$, so that $\int_a^b q(x) \varphi_n(x) \varphi_m(x) dx = 0$, $n \neq m$, and $\int_a^b p(x) \varphi_n'(x) \varphi_m'(x) dx = 0$, $n \neq m$. Suppose, furthermore, that the functions $(p(x) \varphi_n'(x))'$, $q(x)$, $\varphi_n(x)$ are continuous, that the system $\{\varphi_n(x)\}$ is closed and that the system $\{\varphi_n\}$ contains unity. Suppose also that $p(x)$ and $q(x)$ vanish only at $x=a, b$ and that $(p(x))^{-1}$ is integrable over $a \leq x \leq b$. Then the system $\{\varphi_n(x)\}$ is unique and satisfies the following relations: $p(a) \varphi_n'(a) = p(b) \varphi_n'(b) = 0$ and $(p(x) \varphi_n'(x))' + \lambda_n q(x) \varphi_n(x) = 0$, where

$$\lambda_n^{-1} = \int_a^b q(x) (\varphi_n(x))^2 dx.$$

The condition that $(p(x))^{-1}$ is integrable for $a \leq x \leq b$ is then relaxed.

If $p(x) = q(x) = 1$, $a = 0$ and $b = 2x$, then $\varphi_n(x) = x^n$, $n = 0, 1, 2, \dots$. If $p(x) = q(x) = x$, $a = 0$, $b = 1$, then $\varphi_n(x) = I_0(\lambda_n x)$, where $I_0(x)$ is Bessel's function and λ_n are the roots of $I_1(\lambda) = 0$.

Source: Mathematical Reviews,

Vol. 8, No. 5

GAGAEV, B.

Gagaev, B. On convergence in Banach spaces. *Uspehi Matem. Nauk. (N.S.)* 3, no. 3(27), 171-173 (1948).
(Russian)

Let E be a Hausdorff space and let Φ be a set of continuous functions φ on E such that each $\varphi(E)$ is a Hausdorff space and $x=y$ if and only if $\varphi(x)=\varphi(y)$ for all φ in Φ . If $\{x_n\}$ is a sequence contained in E such that $\lim_n \varphi(x_n)$ exists for every φ in Φ , it is immediate that $\lim_n x_n$ exists if and only if every subsequence of $\{x_n\}$ has a convergent subsequence. This note states two special cases of this remark in which (a) E and E' are Banach spaces and either Φ contains a

single one-to-one function from E into E' or else Φ is the set of all linear mappings from E into E' ; and (b) E is a function space and Φ is the set of coefficient functionals in the expansion in terms of an orthonormal basis.

M. M. Day (Princeton, N. J.).

Source: Mathematical Reviews.

Vol. 10 No. 4

GAGAYEV, B.M.

GAGAYEV, B.M.

Gagaev, B. M. On the convergence of trigonometric series. Doklady Akad. Nauk SSSR (M.S.) 51, 5-8 (1948). (Russian)

Let $f(t)$ be of period 2π , L -integrable, even, and let $f(t) \sim \sum a_n \cos nt$. Hardy and Littlewood [J. London Math. Soc. 7, 252-256 (1932)] proved that, if $f(t) = o(\log(1/t))$ as $t \rightarrow 0$ and if $a_n = O(n^{-1})$ for some $\beta > 0$, then $\sum a_n^2 < \infty$. The author proves the following extension. Suppose that $f(t) = o(\varphi(t))$ as $t \rightarrow +0$ and that $a_n = O(\psi(n^{-1}))$, where $\varphi(x)$ and $\psi(x)$ are two positive and monotone functions tending to 0 with x and such that

$$\int_{1/n}^{n/(n+1)} t^{-1} \varphi(t) dt < A, \quad [\omega(n)]^{-1} \sum_{k=1}^n \psi(1/k)/|n-k| \rightarrow 0$$

as $n \rightarrow \infty$. Here A is independent of n , the prime signifies that $k \neq n$ in the summation and $\omega(n)$ decreases monotonically to 0 as $n \rightarrow +\infty$ in such a way that $n\omega(n) \rightarrow \infty$. Under these conditions, $\sum a_n^2 < \infty$. For similar extensions of the Hardy-Littlewood result, see Murgan [Ann. Scuola Norm. Super. Pisa (2) 4, 373-392 (1935)]. A. Zygmund

Sources: Mathematical Reviews,

Vol. 17 No. 1

SP/11/14/2001

or A > A (2, 1, 2-1).

Mathematical Reviews
Vol. 14 No. 9
October 1953
History

Gagayev, B. M. Generalization of the Fourier integral by N. I. Lobachevskii. Svoegorat pyat' let nevkirov geometrii Lobachevskogo, 1826-1926. [One hundred-and-twenty-five years of the non-Euclidean geometry of Lobachevskii, 1826-1951], pp. 79-86. Gosudarstv. Izdat. Tehn.-Teor. Lit., Moscow-Leningrad, 1952. 7.60 rubles.

GAGAYEV, B. M.

Gagayev, B. M. On the existence of eigenvalues of integral equations whose kernels are entire rational functions of a parameter. Ukrainsk. Mat. Z. 4 (1952), 120-123 (Russian).

Let $L(x, y, \lambda) = \sum_{i=0}^m \lambda^i G_i(x, y)$ be a bounded kernel satisfying the usual continuity restrictions of the Fredholm theory, and let $R(x, y, \lambda)$ be its resolvent kernel. The author proves the following results.

Suppose that the Fredholm determinant $D(\lambda)$ of $L(x, y, \lambda)$ is not identically zero. Then (i) a necessary and sufficient condition for $L(x, y, \lambda)$ to possess no eigenvalues is that

$$\left[\frac{d^n}{d\lambda^n} \int_a^b R(x, z, \lambda) dz \right]_{\lambda=0} = 0 \quad (n \geq 2m+1).$$

(ii) if (a) $G_i(x, y) > 0$ ($0 \leq i \leq m$) or (b) $G_0(x, y)$ and $G_1(x, y)$ are symmetric, G_0 being positive definite, then $L(x, y, \lambda)$ has at least one eigenvalue.

F. Smithies

GAGAYEV, B. M.

235T67

USSR/Mathematics - Integrodifferential Equations 21 Jul 52

"Theorems Governing the Existence of Solutions to
Integrodifferential Equations," B. M. Gagayev

"Dok Ak Nauk SSSR" Vol 85, No 3, pp 469-472

Considers the existence of the solns to systems
of integrodifferential eqs that satisfy the Cauchy
conditions. Submitted by Acad S. L. Sobolev
19 May 52.

235T67

GAGAYEV, B. M.

Gagayev, B. M. Existence theorems for solutions of integrodifferential equations. Uč. Zap. Kazan. Univ. 115 (1955), no. 14, 21-28. (Russian)

The author considers the system of integrodifferential equations

$$\frac{d^m y_s(x)}{dx^{m_s}} = L_s(x, y_1(x), \dots, y_n(x)) \\ + \lambda \int_a^x K_s(x, u) M_s(u, y_1(u), \dots, y_n(u)) du \quad (1 \leq s \leq n),$$

where L_s and M_s are differential operators, not necessarily linear, of order less than m_s , and seeks solutions $y_1(x), \dots, y_n(x)$ satisfying the initial conditions

$$y_s(a) = \alpha_s, \quad y_s^{(r)}(a) = \beta_{sr} \quad (1 \leq r < m_s, \quad 1 \leq s \leq n).$$

By a preliminary transformation he reduces the problem to that of finding solutions $z_1(x), \dots, z_N(x)$ of a system of the form

$$\frac{dz_s}{dx} = P_s(x, z_1(x), \dots, z_N(x)) \\ + \lambda \int_0^1 G_s(x, u) Q_s(u, z_1(u), \dots, z_N(u)) du \quad (1 \leq s \leq N).$$

Gogaev, B. M.

where the expressions P_s and Q_s no longer contain derivatives; the initial conditions are now

$$z_1(0) = \dots = z_N(0) = 0.$$

Under the hypotheses that (i) P_s and Q_s are continuous for $0 \leq s \leq 1$, $|r_s(x)| \leq C$, $|P_s| \leq L$, $|Q_s| \leq B$, (ii) $G_s(x, t)$ is the kernel of an integral equation for which the Fredholm theorems hold and

$$\int_0^1 |G_s(x, t)| dt \leq D,$$

and (iii) $B(1 + |\lambda|D) \leq C$, the author shows that the given system has at least one solution. This solution is unique if appropriate Lipschitz conditions are assumed to hold. The existence proof can be extended to certain cases in which P_s and Q_s are only measurable with respect to x .

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The existence proof can be extended to general situations in which P_ε and Q_ε are only measurable with respect to σ .

The principal tool used in the proof of the main result is the Markov-Kakutani fixed-point theorem.

F. Smithies (Cambridge, England)

12/10
S. H. [Signature]

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000614010009-0"

GAGAYEV, B.M. (Kazan')

Study of the orthogonal function theory at Kazan University.
Uch.zap.Kaz.un. 115 no.10:23-24 '55. (MLRA 10:5)
(Functions, Orthogonal)

GAGAYEV, B.M.

Uniqueness of one conjugation problem of functions satisfying
the elliptic equation. Uch.zap.Kaz.un. 116 no.1:33-35 '55.
(MIRA 10:5)

1.Kafedra matematicheskogo analiza.
(Functions)

Lavrent'yev, B. M.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow
Jun-Jul '56. Trudy '56, V. 1, Sect. Rpts. Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Gagayev, B. M. (Kazan'). Some Properties of Orthogonal Functions.

77

Gakhov, F. D. (Rostov-na-Donu). Krikunov, Yu. M. (Kazan').
Topological Methods in the Theory of Function of a Complex Variable and Their Application for Solving Inverse Boundary Problems.

77-78

There is 1 reference, which is a translation into Russian.

Gel'fer, S. A. (Gor'kiy). On a Maximum Conformal Radius of the Fundamental Domain of a Given Group.

78

Mention is made of Lavrent'yev, M. A.

Geronimus, Ya. L. (Khar'kov). On Some Sufficient Convergence Conditions of the Fourier-Chebyshev Process.

78-79

Card 24/80

GAGAYEV, B.M.

Our achievements in the field of mathematics during forty years
of Soviet rule. Izv.vys.ucheb.zav.; mat. no.1:3-8 '57.
(MIRA 12:10)
(Mathematics)

GAGAYEV, B.M.

Problem set forth by N.N.Luzin. Izv.vys.ucheb.zav.; mat. no.1:
99-101 '57. (MIRA 12:10)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.
(Functions, Orthogonal)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614010009-0

GAGAYEV, B.M.

Orthogonal systems of functions whose derivatives are also orthogonal.
Usp.mat.nauk 12 no.2(74):133-136 Mr-Ap '57. (MIRA 10:7)
(Functions, Orthogonal)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614010009-0"

GAGAYEV, B.M.

Work done by Kazan mathematicians on orthogonal systems. Usp.mat.
nauk 12 no.4:251-262 Jl-Ag '57. (MIRA 10:10)
(Kazan--Functions, Orthogonal)

GAGAYEV, B.M.

Theory of infinitely differentiable functions. Uch. zap. Kaz. un.
117 no.9:6-8 '57. (MIRA 13:1)

1. Kazanskij gosudarstvennyj universitet im. V.I. Ul'yanova-Lenina.
Kafedra matematicheskogo analiza.
(Sequences (Mathematics))

85925

16-4100

S/140/60/000/003/004/011
C111/C222

AUTHOR: Gagayev, B.M.

TITLE: On the Generalized Problem of N.N.Luzin

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1960,
Nr.3, pp.101-103

TEXT: Problem: Determine all non-negative two times continuously differentiable weights $g(x)$ for which there exist complete orthogonal systems of continuously differentiable functions containing the 1, the first derivatives of which form a system which agrees with the initial system up to constant factors.

Solution: The single weights with this property are 1 and e^{-x^2} , or such which can be reduced to e^{-x^2} by a linear transformation. To the weight 1 there only corresponds the system

$$(2) \quad 1, \cos\left(2\pi \frac{x-a}{b-a}\right), \sin\left(2\pi \frac{x-a}{b-a}\right), \dots, \cos\left(2\pi n \frac{x-a}{b-a}\right), \sin\left(2\pi n \frac{x-a}{b-a}\right);$$

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On the Generalized Problem of N.N.Luzin

to the weight e^{-x^2} there corresponds the system of Hermitean polynomials.
The author mentions Ya.L.Geronimus.
There are 5 references: 4 Soviet and 1 French.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet imeni V.I.Ul'yanova-Lenina (Kazan' State University imeni V.I.Ul'yanov-Lenin)

SUBMITTED: October 30, 1959

X

Card 2/2

GAGAYEV, B.M.

Progress of mathematical analysis at Kazan University. Uch. zap.
Kaz. un. 120 no.7:67-86 '60. (MIRA 14:9)
(Kazan University--Mathematical analysis)

GAGAYEV, B.M., prof., red.; BYK, T.N., red.

[Collection of postgraduate works; mathematics, mechanics, physics] Sbornik aspirantskikh rabot; matematika, mehanika, fizika. Kazan', Izd-vo Kazanskogo univ., 1964. 179 p.
(MIRA 18:3)

l. Kazan. Universitet.

SHURA-BURA, B.L.; GAGAYEV, V.L.

Luminescent analysis in insect migration studies [with summary in English]. Ent. oboz. 35 no.4:760-763 '56. (MLRA 10:2)

1. Kafedra voyennoy epidemiologii Voyenno-morskogo fakul'teta pri I Leningradskom meditsinskem institute, Leningrad.
(Insects--Migration) (Fluorescence) (Flies)

GAGAYEVA, G. M.

29234 Narusheniye dvizheniy pri razdrazhenii westi-bulyarnogo appara.
Uchen. zapiski (Gos. tsentr. in-t fiz. kul'tury im. Stalina); vyp. 4, 1949,
s. 146-66

SO: Letopsi' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

GAGAYEVA, G. M.

29235 Printsiy postroyeniya metodiki trenirovki vestibulyarnogo appara na osnove izucheniya protsessov reaktsii. Uchen. voprosy (Gos. tsentr. inst. fiz. kul'tury im. Stalina), vyp. 4, 1949, s. 167-212. - Bibliogr: 15 nazv.

SO: Letopsi' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

GAGAYEVA, M.A.

Work of visiting nurses in rural medical sections. Vop. okh.mat. i
det. 1 no.5:80-85 S-0 156. (MIRA 9:11)

1. Iz Gor'kovskogo pediatriceskogo nauchno-issledovatel'skogo instituta (dir. A.A.Prokof'yeva) Ministerstva zdravookhraneniya RSFSR (nauchnyy rukovoditel' raboty - prof. F.D.Agafonov)
(NURSES AND NURSING) (MEDICINE, RURAL)

GAGAYEVA, M.A.; SAFONOV, A.G., red.; POGOSKINA, M.V., tekhn.red.

[Child care in the rural medical district] Child care in the
rural medical district. Moskva, Gos.izd-vo med.lit-ry Medgiz,
1960. 60 p. (MIRA 14:2)
(INFANTS--CARE AND HYGIENE)

GAGAYEVA, M.A.

Results of prophylactic care of children under rural conditions.
Med.sestra 21 no.10:18-21 0 '62. (MIRA 16:4)

1. Iz Gor'kovskogo nauchno-issledovatel'skogo pediatricheskogo
instituta Ministerstva zdravookhraneniya RSFSR.
(CHILDREN--CARE AND HYGIENE)
(PUBLIC HEALTH, RURAL)

GAGAYEVA, Mariya Alekseyevna; TSEYTLIN, A.G., doktor med. nauk
prof., red.; PELEVINA, T.I., red.

[Protection of motherhood and childhood in Gorkiy and
Gorkiy Province, 1860 - 1960] Okhrana materinstva i det-
stva v g.Gor'kom i oblasti (1860-1960). Gor'kii, Volgo-
Viatskoe knizhnoe izd-vo, 1965. 157 p. (MIRA 18:12)

CHENYNE, H E.

BLYUGER, A.F.; GAGAYNE, A.E.; DAKHOVKER, S.Ye.; MINTSENGOF, L.A.; RATEMBERG, N.S.; CHENYY, S.D.

Comparative results of the use of piperazine-adipate and oxygen in the treatment of ascariasis [with summary in English]. Med.paraz.i paraz.biol. 26 no.1:77-80 Ja-F '57. (MLRA 10:6)

l: Iz kafedry infektsionnykh bolezney (zav. - dotsent M.M.Budzhe) Rizhskogo meditsinskogo instituta, Instituta eksperimental'noy meditsiny (dir. - prof. P.Ya.Gerke) Akademii nauk Latviyskoy SSR, Rizhskoy gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach M.M.Popova)

(ASCARIASIS, ther.
piperazine adipate & oxygen, comparison)

(PIPERAZINES, ther. use)

piperazine adipate in ascariasis, comparison with oxygen ther.)

(OXYGEN, ther. use
ascariasis, comparison with piperazine adipate ther.)

GAGDIYEV, T.G.

Modeling of deformable solids involving distortion of the linear
similarity factor. Izv. Otd. geol.-khim. i tekhn. nauk AN Tadzh.SSR
1:3-18 '60. (MIRA 15:1)

1. Institut seysmostoykogo stroitel'stva i seismologii AN Tadzhikskoy
SSR.
(Engineering models)

L 64814-65 EPF(c)/EWP(j) RM

ACCESSION NR: AP5023225

RU/0003/64/015/010/0595/0600

AUTHOR: Herscovici, J.; Bota, T.; Gagel, I.; Duvalma, M.; Sireteanu, D. I. Zissu, Rodica

TITLE: Complex utilization of acetone. The synthesis of intermediate solvents

SOURCE: Revista de chimie, v. 15, no. 10, 1964, 595-600

TOPIC TAGS: acetone, organic solvent

ABSTRACT:

The authors describe the pilot-plant production of a number of solvents with intermediate-range boiling points from acetone, giving some information on the characteristics and uses of the products as well as on the principal parameters of the process. The products synthesized include diacetone alcohol, mesityl oxide, methyl-isobutylketone and methyl-isobutylcarbinol.

Orig. art. has: 8 formulas, 8 tables, 3 figures, 2 graphs.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: 00, 00

NR REF Sov: 000

OTHER: 010

JFM

Card 1/1 MLR

(S)

AUTHORS: Gagel'gants, A. A., Gal'perin, Ye. I., S07/20-127-3-39/54
Kosminskaya, I. P., Krakshina, R. M.

TITLE: The Structure of the Earth's Crust in the Central Part of the
Caspian Sea as Determined by Deep Seismic Sounding (Stroyeniye
zemnoy kory tsentral'noy chasti Kaspiyskogo morya po dannym
glubinnogo seysmicheskogo zondirovaniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 520-522
(USSR)

ABSTRACT: Under the International Geophysical Year program, the Institut
fiziki zemli AN SSSR (Institute of Physics of the Earth, AS
USSR) in cooperation with the Vsesoyuznyy nauchno-
issledovatel'skiy institut geofiziki (All Union Scientific
Research Institute of Geophysics), the Azerbaiydzhan nauchno-
issledovatel'skiy Institut po dobystche nefti (Azerbaiydzhan
Scientific Research Institute of Petroleum Production) as well
as the Institut okeanologii AN SSSR (Oceanography Institute
AS USSR) devised test apparatuses and methods of deep crustal
seismic probing (SMF) from a boat (Refs 1-3). At the same time
the subsurface structure of the Caspian Sea area was

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SC7/20-181-3-13/52
The Structure of the Earth's Crust in the Central
Part of the Caspian Sea as Determined by Deep Seismic Sounding

investigated. The peculiarities of deep crust seismic probing from a ship have already been described (ref 4). The subsurface structure of the crust in the area in question is interesting from both the geologic and the geophysical standpoint. Major structural entities with different geological histories meet in this region: the Epihercynian table of Turkmeniya meets the folded belt of the Caucasus. The determination of the structure of the junction is important to the prospects of oil exploration. Figure 1 shows subsurface contours drawn on the principal separation planes between the structures; the depth limits are rather complex. An analysis of cross-sections and maps has indicated a scheme of the crust formation (fig 2). The epihercynian table is composed of 3 layers: a) a thin sedimentary layer (2-3 km thick) with a seismic velocity of approximately 3 km/sec, b) a 10-15 km thick granite layer and c.) a basalt layer of some 20-25 km thickness. The crust in the area of the table is about 30-35 km thick. In the contact area between table and folded belt the sedimentary layer thickens rapidly while the granite layer thins. In the actual folded-belt region the crust (here 40-45 km thick) contains only 2 layers:

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The Structure of the Earth's Crust in the Central
Part of the Caspian Sea as Determined by Deep Seismic Scouting SOV/20-123-3..32/54

the sedimentary (more than 20 km thick) and the basalt. The great thickness of the sedimentary layer and the thin overlying granite layer may be characteristic of certain zones of alpine folding which have in the past undergone intense folding and even now are undergoing folding. There are 2 figures and 4 Soviet references.

PRESENTED: June 26, 1958, by N. S. Shatskiy, Academician

SUBMITTED: June 9, 1958

Card 3/3

ZNAMENSKIY, V.V.; RYABINKIN, L.A.; FETROV, L.V.; VARTANOV, S.P.;
GAGEL'GANTS, A.A.; KOTLYAREVSKIY, B.V.; LOZOVSKAYA, I.F.;
LYAKHOVITSKIY, F.M.; MAR'IN, N.I.; OSTROVSKIY, V.D.; PARIYSKAYA,
G.N.; RIKHTER, V.I.; RUBO, V.V.; SLUTSKOVSKIY, A.I.; TARUTS,
G.M.; TURCHANENKO, N.M.; SHMIDT, N.G.; SHNEYERSON, M.B.; GURVICH,
I.I., red.; BORUSHKO, T.I., red.izd-va; GUROVA, O.A., tekhn. red.

[Instructions for seismic prospecting] Instruktsiia po seismoraz-
vedke. Moskva, Gosgeoltekhizdat, 1962. 95 p. (MIRA 15:12)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedor.
(Seismic prospecting)

AKSENOVICH, G.I.; ARONOV, L.Yo.; GAGEL'GANTS, A.A.; GAL'PERIN, Ye.I.;
ZAYONCHKOVSKIY, M.A.; KOSMINSKAYA, I.P.; KRAKSHINA, R.M.;
VERES, L.F., red. izd-va; TIKHOMIROVA, S.G., tekhn. red.

[Deep seismic sounding in the central part of the Caspian Sea]
Glubinnoe seismicheskoe zondirovanie v tsentral'noi chasti Kas-
piiskogo moria. [By] G.I. Aksenovich i dr. Moskva, Izd-vo Akad.
nauk SSSR, 1962. 150 p. (MIRA 15:8)

(Caspian Sea--Earth--Surface) (Seismology)

L 55992-65 SW7(1)/EWA(b) Feb GW
ACCESSION NR: AT5014770

UR/2552/65/000/043/0018/0028

AUTHOR: Gagel'gants, A. A.; Kogan, L. I.

TITLE: Method and techniques of detonation work from the side of a ship seismic station during seismic investigations at sea by the reflected wave method

SOURCE: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki. Prikladnaya geofizika, no. 43, 1965, 18-28

TOPIC TAGS: oceanic seismometry, oceanic seismic profile, shipboard seismometry, reflected wave method, detonation technique, seismic sea station, floating detonator

ABSTRACT: Although seismic operations could cover 10—50 km daily, meteorological conditions limit the number of working days to 7—9 per month. To remedy the situation, a new approach to detonation shown in Fig. 1 of the Enclosure, was developed at the NINCE of VNIIgeofiziki. The floating detonation cable PVK-5 carries at its

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end (at a safe distance from the ship) the contact device +B connected to the positive pole of the constant voltage generator G; the other pole -A is grounded 20—30 m from the ship. The article gives detailed information about the circuits, the floating detonation device, and their operation. It also lists safety measures needed for safe operation. At present, this new equipment is used by NIMGE seismic parties operating in the USSR and abroad. At the OMGR, Yu. M. Mistryukov and others have completed the development of a unit for the automatic control of all elements at the seismic station. The development and introduction of this unit into practical operation was carried out by a group of coworkers of the NIMGE VNIIGeofiziki comprising S. A. Chelnokov, P. M. Zakharov, G. V. Gabrielyan, D. F. Khamrayev, F. I. Cherstvov, B. N. Bondarenko, M. Abdelyev, Yu. M. Mistryukov, and the present authors. Orig. art. has 6 formulas and 6 figures. [08]

ASSOCIATION: None

DRAWING NO. 500-1

Card 2/4

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OTHER: 001

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ATT'D PRESS: 4032

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APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000614010009-0"

GAGEMAN, Y.V.

PESTOV, Aleksey Ivanovich; GAGEMAN, Yuriy Vil'gel'movich; NIKITIN, P.S.,
redaktor; VOLCHOV, K.M., tekhnicheskiy redaktor

[Continuous transportation loading machinery; a collection of
construction elements] Peregruzochnye mashiny nepreryvnogo
transporta; atlas konstruktsii. Leningrad, Izd-vo "Techno
transport," Leningradskoe otd-nie, 1956. 91 p. (MLRA 9:10)
(Loading and unloading)
(Conveying machinery)